

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
17 June 2004 (17.06.2004)

PCT

(10) International Publication Number
WO 2004/050063 A1

(51) International Patent Classification⁷: **A61K 9/14, 7/48**

(21) International Application Number:
PCT/EP2003/013560

(22) International Filing Date: 2 December 2003 (02.12.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
MI2002A002549 2 December 2002 (02.12.2002) IT

(71) Applicant (*for all designated States except US*): AC-TIMEX S.r.l. [IT/IT]; Area Science Park, Basovizza S.S. 14, Km 163,5, I-34012 Trieste (IT).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): CORVI MORA, Paolo [IT/IT]; Via Scalabrini 49, I-29100 Piacenza (IT). CARLI, Fabio [IT/IT]; Salita Cedassammare, 3/1, I-34136 Trieste (IT). CANAL, Tiziana [IT/IT]; Campo S. Luigi 4, I-34142 Trieste (IT).

(74) Agent: GERVASI, Gemma; Notarbartolo & Gervasi S.p.A., Corso di Porta Vittoria 9, I-20122 Milan (IT).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— *of inventorship (Rule 4.17(iv)) for US only*

Published:

— *with international search report*
— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: QUATERNARY COMPOUNDS COMPRISING PROPOLIS AS THE ACTIVE SUBSTANCE

(57) Abstract: The present invention describes a quaternary composition consisting of propolis delivered in a hydrophilic carrier (cyclodextrin and cyclodextrin derivatives) and co ground with the aid of two compounds for the preparation thereof in the form of a finely divided powder. The composition exhibits advantageous dissolution characteristics in aqueous environments compared to native propolis, hence resulting in greater bioavailability of the active ingredients contained therein.

WO 2004/050063 A1